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Arytaina yangi (Hemiptera, Psylloidea, Psyllidae), A New Pest of *Cajanus cajan*[1]

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Abstract: *Arytaina yangi* Fang was recorded for the first time as a pest to Angola pea, *Cajanus cajan* (L.) Millsp., in Taiwan. The morphology of its first to fifth instar nymphs were described and illustrated.

Key words: Psyllidae, *Arytaina yangi* Fang, Angola pea, *Cajanus cajan* (L.) Millsp.

INTRODUCTION

There are two species of genus *Arytaina* in Taiwan, *A. albizziae* Yang and *A. yangi* Fang. The former was found on, *Albizza julibrissin* Durazz. *Arytaina yangi* was found on *Cajanus cajan* (L.) Millsp. Host plants of both species are all belonging to the family of Mimosaceae.

Arytaina yangi Fang, 1990

Fig.1

Arytaina yangi Fang, 1990. J. Taiwan Mus. 43(1) : 111

First instar nympg (Fig. 1-A)

Length of body: 0.31-0.32mm

Length of antenna: 0.09mm

Body oval, about 1.9 times as long as wide and general color orange yellow. Eyes reddish. Abdomen yellow. Head and prothorax fused completely, separated from mesothorax by membrane, anterior margin rounded. Antennae 2-segmented, relative length of each segment about 5.2 : 1.0, with one sensorium on segment II and 2 apical setae. Meso-and metathorax with 3+3 large medial and 2+1 small lateral sclerites, with 1+1 lanceolate setae at margin. Legs long, 3-segmented, tibiotarsus with 2 claws, one at apex, with 7 pairs of lanceolate setae at margin, 4 pairs of lateral lanceolate setae and 6 pairs of medial lanceolatesetae. Anal opening ventral, set a distance from apex of abdomen. Ring of circum-

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anal porescomposed of single row of slit-like pores.

Second instar nymph (Fig. 1-B)

Length of body: 0.44mm

Length of antenna: 0.14mm

Differs from the first instar nymph as the follow : Body about 1.8 times as long as wide. Anterior margin of head+ prothorax more or less straight around at apex. Antennae 3-segmented, relative length of each segment about 1.5 : 1.0 : 5.5, with one sensorium on segment Ⅲ. Wing-pads developed slightly, each with a pair of spatulate setae. Meso-and metathorax with 3 + 3 large medial and 2 + 2 lateral sclerites. Abdomen with 6 pairs of strip-like sclerites at base, with 4 pairs of lanceolate setae at margin, but without any lanceolate setae on the dorsal surface of abdomen.

Third instar nymph (Fig. 1-C)

Length of body: 0.54-0.58mm

Length of antenna: 0.16-0.18mm

Differs from the second instar nymph as follow : Body about 1.7 times as long as wide, general color pale yellow. Antennae 5-segmented, relative length of each segment about 2.5 : 1.8 : 3.0 : 1.0 : 2.0, with 2 sensoria on segment Ⅲ and Ⅳ. Wing-pads developed, non-overlapping, with 1+2 pairs of spatulate setae, Meso-and metathorax with 3+2 large medial and 2+2 lateral sclerites. Abdomen with 4 pairs of strip-like sclerites at base, the first one was separated into two pieces, with 9 pairs of spatulate setae at margin totally.

Fourth instar nymph (Fig. 1-D)

Length of body: 0.72-0.82mm

Length of antenna: 0.24-0.34mm

Differs form the third instar nymph as follow : Body about 1.4 times as long as wide, general color pale brown. Head+prothorax with 3 pairs of spatulate setae at anterior margin, one pair on the surface of sclerites and one pair at the margin below eyes. Antennae 7-segmented, relative length of each segment about 2.6 : 1.5 : 1.0 : 1.0 : 2.6 : 1.1 : 1.4, with 3 sensoria on segment Ⅲ and Ⅴ-Ⅵ. Wing-pads developed and overlapping. Forewing-pads with 7 pairs and hindwing-pads with 2 pairs of spatulate setae at margins. Apex of forewing-pad external to margin of abdomen. Abdomen with 4 pairs of strip-like sclerites at base and with about 10 pairs of spatulate setae at margin.

Fifth instar nymph (Fig. 1-E)

Length of body: 0.98-1.08mm

Length of antenna: 0.42-0.46mm

Body elongate, about 1.5 times as long as wide, general color pale brown. Eyes dark red. Sclerites and wing-pads brown. Head and prothorax fused completely, with a pair of large sclerites on dorsal surface, anterior margin straight between antennae, with about 7 pairs of spatulate setae on the surface. Antennae 9-segmented, relative length of each segment about 2.5 : 1.2 : 1.2 : 1.3 : 1.3 : 1.0 : 2.3 : 1.0 : 1.7, with 4 sensoria on segment Ⅲ, Ⅴ, Ⅶ and Ⅷ, with 2 long setae at the last segment. Meso and metathorax with 3 + 2 medial and 2 + 1 lateral

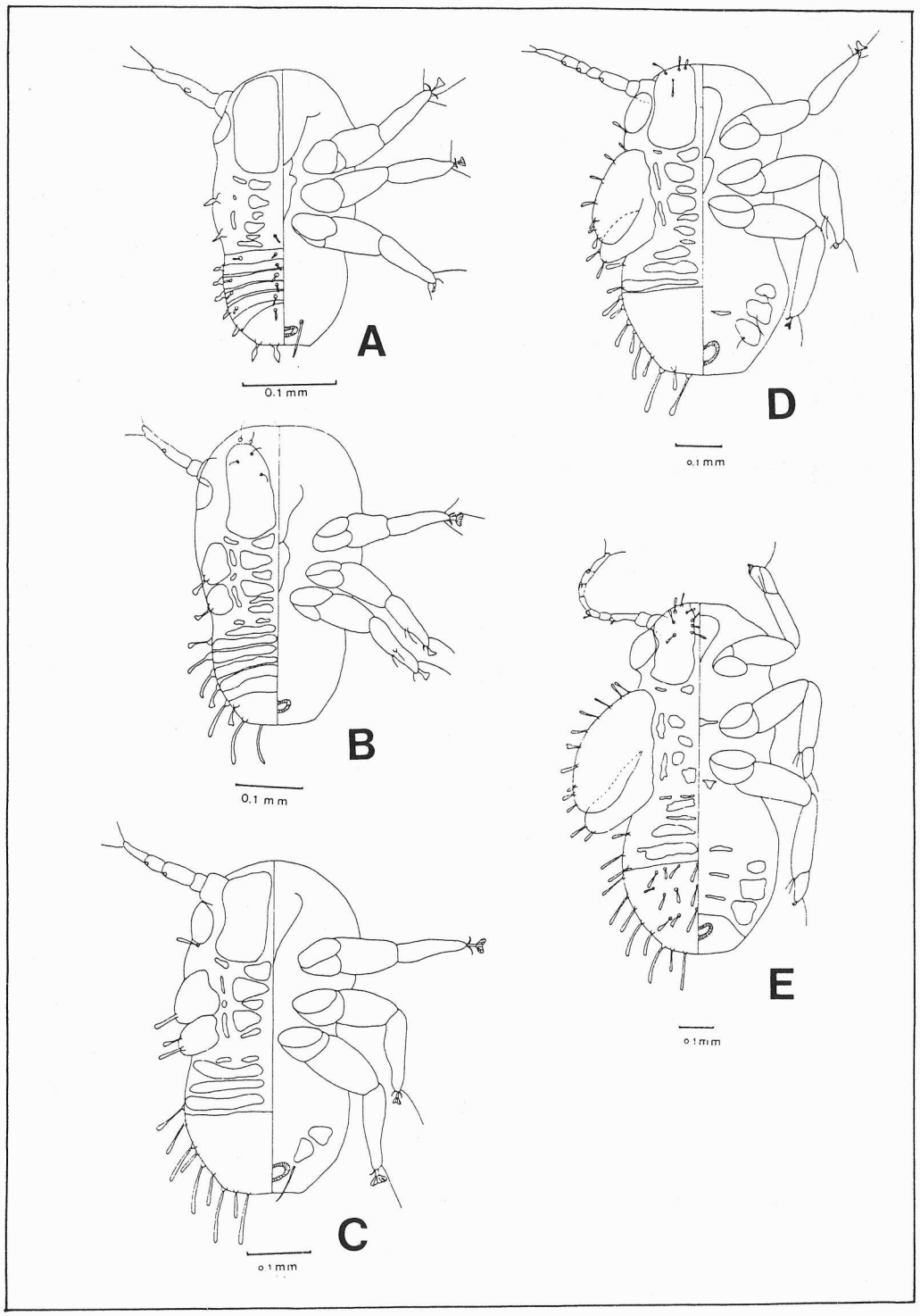

Fig. 1. *Arytaina yangi*Fang, 1990. A. First instar nymph; B. Second instar nymph; C. Third instar nymph; D. fourth instar nymph; E. fifth instar nymph.

sclerites. Wing-pads developed and overlapping. Forewing-pads with 10 pairs of spatulate setae at margins, apex adjacent to margin of hindwing-pads. Hindwing-pads with 2 pairs of spatulate setae at margins, apex external to margin of abdomen. Legs 4-segmented, apex of tarsus with 2 claws, and one funnel-shaped arolium and one golf-club-shaped seta. Abdomen with 5 pairs of strip-like sclerites at base and a large one at apex, with many pairs of spatulate setae at margin and on the dorsal surface of abdomen. Anal area of abdomen scleritized. Anal opening ventral, set a distance to apex of abdomen, ring of circum-anal pore composed of single row of slit-like pores.

Specimens examined :

1st instar nymph : 2,

2nd instar nymph : 1,

3rd instar nymph : 2,

4th instar nymph : 5,

5th instar nymph : 9,

Hsiunglin (芎林) , Hsinchu Hsien (新竹縣) , 12-Ⅷ-1997, H. P. Shih.

Host plant : *Calanus cajan*(L.) Millsp.

Distribution: Taiwan.

REFERENCE

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一種樹豆新害蟲— *Arytaina yangi* (半翅目：木虱總科：木虱科)[1]

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摘要：*Arytaina yangi* Fang 爲樹豆（*Cajanus cajan*(L.) Millsp.）之新記錄害蟲，本文詳細的描述並繪製各齡若蟲的形態特徵。

關鍵詞：*Arytaina yangi* Fang、木虱科、樹豆、*Cajanus cajan*(L.) Millsp.

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